

SPU Drainage System – Sediment Removal



CDWAC Meeting
April 11, 2012

Urban Watersheds Strategy Vision

Improve the health of Seattle's creeks, wetlands, lakes, the Duwamish River and Puget Sound, including improvements to **water quality**, sediment quality, flow, and habitat for the protection of public health and aquatic life.



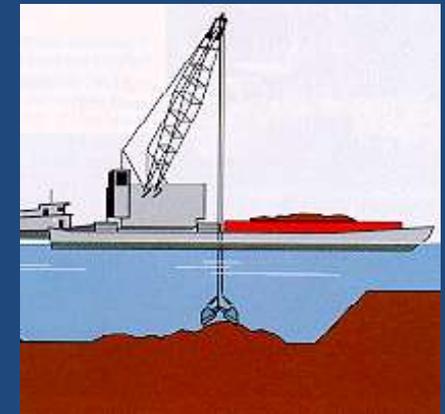
Flow



**Water
Quality**



Habitat



Sediment
Quality

WQ Strategies

Prevent
pollutants

1. Establish, implement, and enforce regulations for source control BMPs
2. Provide education, outreach, training and incentives on source control BMPs
3. Influence pollutant reduction policy

Reduce/remove
pollutants

4. Eliminate illicit discharges
5. Construct stormwater treatment facilities
6. **Operate, inspect, and maintain drainage system**
7. Construct CSO facilities
8. Operate, inspect, and maintain wastewater system

RWB
Actions

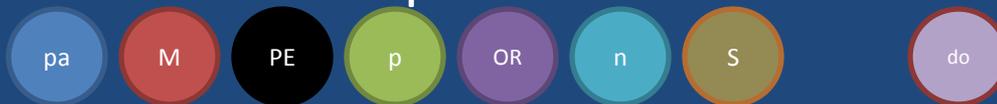
9. Conduct actions in receiving water bodies



Strategy #6. Operate, inspect, and maintain drainage system.



Importance: Ensures function of facilities and conveyance system and removes pollutants.



Solids Removal from SPU Drainage System

- Drainage System Maintenance
 - Facility Maintenance
 - Drainage Conveyance Maintenance
 - CB Cleaning
 - Ditch Cleaning
 - Line Cleaning
- Street Sweeping



SPU Drainage System Maintenance – Solids Removal Actions

Facility Maintenance

- >140 Stormwater Quality Facilities
- >300 Flow Control Facilities

Drainage Conveyance Maintenance

- Catch basin cleaning
 - ~ 40,000 catch basins
- Ditch & culvert cleaning
 - ~ 70 miles ditches
- Line cleaning
 - ~ 460 miles of storm drains



SPU Drainage System Maintenance

Solids Removed

SPU

- Halladay and West Seattle Decant Facilities: drainage system maintenance (catch basins, facilities, line cleaning) and creek sediment removal
 - 2009: 5,000 wet tons *
- Meadowbrook Pond
 - 2003, 2004, 2005, 2006: 400 - 1,500 wet tons/yr
 - 2012: ~ 15,000 wet tons?

Contractors

- Duwamish/EWW Line Cleaning
 - 2011 : ~ 100 wet tons, 5,152 linear ft
- CBSF Maintenance
 - 2011: 300+ cartridges, 36 lbs/cartridge



Street Sweeping for Water Quality

Clean Streets for a Clean Sound

2011 Accomplishments – First Year

- ~96,000 kg total suspended solids (TSS), 744 wet tons
- 6,675 curb miles swept
- SDOT partnership

2012 Targets

- 105,000 kg TSS
- 9,500 curb miles swept



Questions?

Pollutant “Cocktail”



- PA Pathogens
- M Metals
- PE Petroleum Hydrocarbons
- P Pesticides
- OR Other Organics
- N Nutrients
- S Sediments
- T Temperature
- DO Organic Matter (DO)
- PH pH

Strategy #5. Construct stormwater treatment facilities



Importance: Final option for removing pollutants from stormwater before entering receiving waters.

